

From owner-qrp-l@netcom.com Sun Jan 1 12:44:22 1995
Date: Tue, 27 Dec 1994 01:37:32 GMT
From: g3rjv@gqrp.demon.co.uk (Rev George Dobbs)
Message-Id: <287@gqrp.demon.co.uk>
Subject: (none)

subscribe

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George Dobbs G3RJV "It is vain to do with more,
G-QRP Club what can be done with less."
----- William of Occam (1290-1350)

From owner-qrp-l@netcom.com Sun Jan 1 18:59:30 1995
From: "Tim Stabler" <TSTABLER@iunhaw1.iun.indiana.edu>
Date: Sun, 1 Jan 1995 16:28:09 CST
Subject: glasses
Message-Id: <F04FD27AC2@iunhaw1.iun.indiana.edu>

I saw the comment about wearing eyeglasses on these PC boards. A couple years ago, I went to Brookstone and got a pair of magnifying glasses that clip to my eyeglasses. I do not work on any board, regardless of size without my extra glasses. A wonderful investment.

From owner-qrp-l@netcom.com Sun Jan 1 21:25:04 1995
From: Byron8LCZ@aol.com
Date: Sun, 1 Jan 1995 19:30:08 -0500
Message-Id: <950101193007_4097076@aol.com>
Subject: INTERNET & THE QRP LIST

It would be interesting to find out how many different ways there are to sign on with the QRP-List and what the cost differences are.

I am a member of America On-Line. I pay a monthly fee of 10.00 and get 5 hours of time. after that its 3.50 per hour. When you first sign up they give you ten free hours to get used to the system.

the new AOL telecomm program V2.0 has a Flash Session, that can log-on, download messages, upload messages and log off in 2 or 3 minutes usually. this keeps my on line time to a minimum. i can then read the messages and draft replys all off-line.the next time i log on, my replys are sent automatically. Internet access is free, there are no extra charges for getting mail. FTP downloads are avail and other features. AOL is working on supplying full Internet access to all its customers.

After paying 12.50 an hours on Compuserve, 6.00 on GEnie and 5.00 on Delphi, this seems very reasonable.

72, byron Byron8LCZ@aol.com

From owner-qrp-l@netcom.com Mon Jan 2 00:00:17 1995
Date: Sun, 1 Jan 1995 18:39:46 -0800 (PST)
From: "Henry B. Smith" <hbs@crl.com>
Subject: Re: INTERNET & THE QRP LIST
Message-Id: <Pine.SUN.3.91.950101183442.15934A@crl12.crl.com>

On Sun, 1 Jan 1995 Byron8LCZ@aol.com wrote:

> It would be interesting to find out how many different ways there are to sign
> on with the QRP-List and what the cost differences are.
> ... etc ...

I pay \$17.50 a month flat rate for 24 hrs, no limit, no minimum, full internet (including WEB on my PC) service. Local dial-ups (no charge) in most major cities in the US.

CUL,

Smitty, NA5K

From owner-qrp-l@netcom.com Sun Jan 1 09:39:33 1995
Date: Sun, 1 Jan 1995 01:11:24 -0500 (EST)
From: Aa4xx <aa4xx@nando.net>
Subject: QRP Rigs Needed
Message-Id: <Pine.SUN.3.90.950101003222.16878B-100000@merlin.nando.net>

Dear Gang,

Several weeks ago I had the opportunity to meet Joe Fairclough, WB2JKJ, who is trustee of the Radio Club of Junior High School 22 in the Big Apple. Joe is a long-time English teacher in the NYC school system who is trying to give the young folks in his charge a chance at life. In 1980, Joe instituted a revolutionary teaching program named "Education through Communication." The entire curriculum at JHS 22 is tied to ham radio. The following goals were established:

- Teach morse code at the beginning of the term and at some point spelling and vocabulary in code
- Reading assignments from ham publications
- Use of the novice license guide as main text, obtaining all grammar and sentence structure from it
- Letter writing and QSL'ing. It brings a piece of the outside world to the classroom daily

The radio club of JHS 22 originated the Classroom Net. It is the longest running educational network in ham radio. You may have heard them on 40 or 15 meters --7.238 MHz Mon-Fri 7-8:30 AM EST

21.395 MHz

9AM - 3PM EST

Joe's school program is totally supported through donations of equipment. There is a genuine need for QRP rigs and accessories at this time. All donations are tax deductible as a charitable contribution--we all are aware that tis not long before the tax man cometh. Maybe some of us might have a rig or two that we could "send to school." It could make a big difference in some aspiring ham's life.

For more information, you may contact Joe via the following address:

The Radio Club of JHS 22

PO Box 1052

New York, NY 10002

Tel (516) 674-4072

Fax (516) 674-9600

Happy New Year to all!

Paul AA4XX@nando.net

From owner-qrp-1@netcom.com Sun Jan 1 15:18:08 1995

Date: Sun, 1 Jan 1995 13:02:44 -0500 (EST)

From: prvalko <prvalko@vela.acs.oakland.edu>

Subject: Re: QRP Rigs Needed

Message-Id: <Pine.3.89.9501011224.C8481-0100000@saturn.acs.oakland.edu>

On Sun, 1 Jan 1995, Aa4xx wrote:

> Dear Gang,

> Several weeks ago I had the opportunity to meet Joe Fairclough,
> WB2JKJ, who is trustee of the Radio Club of Junior High School 22 in
> the Big Apple.

[snip]

I do not doubt that this program is worthwhile but I urge everyone to take a second and look at the needs of their local club and schools first.

Our club also provides free radios for students on a loaner basis. I highly suggest you start doing the same thing with the school where your club meets or your local school. I don't really know what it is that "bothers" me about the JHS 22 program except perhaps that it has gotten too big(?) and may in fact be draining resources that could be better utilized locally? I don't know... maybe this group is nationwide and DOES provide equipment to schools across the country... that would be outstanding and I would support that effort 100%. I do know that OUR club can't afford column width ads in QST asking for donations.

If someone from that organization could explain the program I know *I*

would be interested in learning more. Think globally, act locally... that is a catchy phrase!

73 =paul=

From owner-qrp-l@netcom.com Sun Jan 1 12:02:40 1995
Date: Sun, 1 Jan 1995 17:45:23 +0200
From: Kein{nen Paul <k23690@proffa.cc.tut.fi>
Message-Id: <199501011545.RAA11956@proffa.cc.tut.fi>
Subject: Re: R2 diplexer and preamp

John Seboldt (rohrwerk@holonet.net) wrote:

[About shifting the diplexer corner frequencies further away from the audio passband.]

> Have you made measurements of the phase shifts, or are you just theorizing?
> It would be interesting to know.

I currently have only one one diplexer, so I haven't made any measurements.

To illustrate the general principle, I fired up the spreadsheet and calculated the amplitude and phase response for a pair of simple first order RC low-pass network versus normalized frequency. The resistor is the same in both cases but the capacitor in the second network is 10 % larger to simulate the worst case of +/- 5 % tolerance of two capacitors.

f/fc	Gain1 [dB]	Gain2 [dB]	Dif [dB]	Phase1 deg	Phase2 deg	Dif deg
0.125	-0.07	-0.08	0.01	7.12	7.82	-0.70
0.25	-0.26	-0.32	0.05	14.02	15.36	-1.34
0.50	-0.97	-1.15	0.18	26.54	28.79	-2.24
1.00	-3.01	-3.44	0.43	44.97	47.70	-2.73
2.00	-6.98	-7.66	0.67	63.41	65.54	-2.12
4.00	-12.30	-13.08	0.78	75.95	77.18	-1.23
8.00	-18.12	-18.94	0.82	82.87	83.51	-0.64

With a 3 kHz corner frequency the amplitude error at 3 kHz is 0.43 dB and phase error of 2.7 degrees. If the corner frequency is shifted to 6 kHz, the error at 3 kHz is only 0.18 dB and 2.2 degrees. With 12 kHz corner frequency, the worst case error with +/- 5 % capacitors is 0.05 dB and 1.3 degrees.

This general principle of moving the corner frequency further away from the required passband to reduce the sensitivity to component tolerances applies also to more complex filters with Butterworth design.

- > I think the reason for the voice frequency bandwidth is simply to
- > provide that
- > much less of a bandwidth for the following circuitry to process
- > (even though
- > the frequency response of the diplexer is really not all that sharp).
- > But you may well be right.

The maximum recommended input to the SBL-1 mixer is about 0 dBm and with 8 dB of mixer and diplexer losses the output is just under 100 mV RMS. Amplifying this by 40 dB and we end up at 10 V RMS, which is far too much for a unipolar 12 V supply. A 30 dB preamp would be more appropriate.

The phase shifter are working more or less at unity gain, but they should have plenty of open loop gain at the highest input frequencies and the full power bandwidth should be much larger than the diplexer low pass corner frequency. I haven't found the specs for NE5514, but the popular TL074/TL084 quads have a gain bandwidth product of 3 MHz and full power bandwidth of 100 kHz, while the corresponding values for the low noise NE5532 dual op-amp are 10 MHz and 140 kHz, so I don't think that the phase shifter is a problem (provided that the preamp gain is reduced).

- > John, K7RO, published his setup with R2/T2 rigs in December QRPP.
- > He mentions
- > a preamp modification (the second stage becomes a standard grounded-emitter
- > stage rather than a source follower) from W7ZOI that claims to
- > reduce total RX
- > noise figure from 20 to 12 dB.

This is very interesting as Rick said in the R1 article (QST Aug. 1992) that the calculated noise figure was 14 dB (7 dB mixer losses, 2 dB losses in the diplexer and 5 dB preamp noise figure) and that the measured noise figure was 4 to 6 dB worse and attributed the difference to the 1/f noise at low IF (audio) frequencies.

If John's claim is correct, the preamp noise figure would be negative ! (or Rick incorrectly attributes the excessive noise figure to 1/f noise instead of a larger preamp noise figure than expected).

Does anybody have the schematic in computer readable form or a SPICE list of the design ?

- > I don't know what this does to strong-signal handling.
- > Perhaps it helps by driving the audio phase shift stages harder and

> overriding their noise. It certainly increases the overall gain.

Are you sure that there was no overall feedback to stabilize the gain, since the original 40 dB gain already degrades the strong signal handling.

Paul OH3LWR

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X.400	: G=Paul S=Keinanen O=Kotiposti A=ELISA C=FI		

From owner-qrp-l@netcom.com Sun Jan 1 14:22:07 1995
Date: Sun, 01 Jan 1995 12:00:04 EST
From: RTRC25A@prodigy.com (MR PRESTON J DOUGLAS)
Message-Id: <013.02534024.RTRC25A@prodigy.com>
Subject: Radiokit QRP30

Thanks, Byron for your comments. Thought I'd reply via the list, since your questions were probably of general interest:
First contact with QRP30--W9JJX Ft Wayne, Indiana (I'm on Long Island so this isn't bad.) He c/o sig jumping (due to my trying to set the semi-QSK too fast--the jump is a K1QBK design flaw that has only been mostly solved in descended designs.)
There is a drive pot (mini--board mounted, not on the back panel).
Incidentally, stability increases with decrease in drive so that at about 2watts the rig is a brick--see next.
At five watt level the rig is intolerant of swr and goes into paroxysms of harmonic or spurious oscillations clearly audible in the rig's own receiver which is functional as a transmitted signal monitor for sidetone during transmit. I have requested the stabilizing kit from Radiokit and will report its effect on stability at full output with variations of swr.
At least now there are three of us or more who have built this radio on the list, in case someone needs advice.
Preston WJ2V